Associative Containers Solutions

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Associative Containers

- Give a brief, general description of the associative containers provided by the C++ Standard Library
  - Elements have a "key" which has some relationship to the element's value
  - This key can be used to retrieve elements
  - The key is also used internally by the container to order its contents
  - By default, the elements are ordered by calling the key's overloaded < operator
  - No support for position-dependent features such as push_back(), indexing, etc

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Sets and Maps

- Briefly describe std::set and std::map
  - In std::set, the element's value also acts as its key
  - The elements must be unique - duplicates cannot be inserted
  - In std::map, the element is a pair of data items
  - The first member of the pair is the element's key and the second member is its value
  - The element keys must be unique - elements with duplicate keys cannot be inserted

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std::multiset and std::multimap

- What is the main difference between std::multiset and std::multimap and std::set and std::map?
  - With these data structures, elements can have duplicate keys

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